Vol. XXXVIII No. 2 December 2003

NEW JERSEY DEPARTMENT OF AGRICULTURE

FOREST PEST REPORTER

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www.state.nj.us/agriculture/plant

GYPSY MOTH EGG MASS SURVEYS COMPLETED

The statewide aerial gypsy moth defoliation survey found that 58 municipalities experienced some level of gypsy moth defoliation during the spring and summer of 2003. The Department contacted the administrators of the affected municipalities and provided information on potential gypsy moth problems for the spring of 2004. Of the 58 municipalities contacted, 44 municipalities requested the Department to conduct egg mass surveys during the fall season to assess potential gypsy moth infestations and identify areas for treatment next spring.

Based on the finding of the municipal surveys, only 146 acres, in Atlantic and Cape May counties, have been proposed for treatment in the spring of 2004. This would be the smallest amount of lands treated for gypsy moth infestation in the state since the inception of the aerial suppression program in the 1970s. This major decline in gypsy moth population can be attributed to increased activity of the gypsy moth fungus, *Entomophaga maiamiga*, and the moist environmental conditions experienced in New Jersey during 2003.

A Gypsy Moth Scoping session is scheduled for January 21, 2004 at the Health & Agriculture building in Trenton. The purpose of the session is to outline the Department's proposed aerial suppression program for 2004 and to gather public comment concerning these activities.

EMERALD ASH BORER SURVEY IN NEW JERSEY

The Emerald Ash Borer, *Agrilus planipennis,* is a recently discovered foreign insect pest of ash trees. Since its discovery in Michigan and Ontario, Canada, in 2002, infestations have also been reported in Ohio, and in ash trees shipped to Maryland and Virginia.

The New Jersey Department of Agriculture had entered into a cooperative survey with the USDA Forest Service to determine if this insect was inadvertently introduced into the state. Ash trees are very common in the northern counties of the state and encompass a reported 156,000 acres of the urban environment in the state.

Program goals of the survey were to educate professionals in the nursery and landscape industries about the Emerald Ash Borer and conduct field surveys in both urban and rural forests containing stands of ash.

More than 1,862 "Pest Alert" brochures had been mailed to landscapers and nurserymen throughout the state informing them about this insect pest, while field staff conducted ground surveys of more than 211 sites containing more than 2,346 ash trees in 40 nursery locations, sawmills and native ash stands located in Bergen, Hunterdon, Mercer, Middlesex, Morris, Passaic, Somerset, Sussex, and Warren Counties. All sites inspected during the survey were negative for this exotic forest pest

SOUTHERN PINE BEETLE UPDATE

The Southern pine beetle, *Dendroctonus frontalis*, is one of the most destructive pests of pines in the southern United States, Mexico and Central America. This insect lives predominantly in the inner bark of pine trees and feeds on the phloem tissues of the tree. Damage by these insects causes girdling and eventual death of the host tree. The beetle ranges from Pennsylvania to Texas and from New Mexico to Central America. It attacks and can kill all species of pines, but prefers loblolly, shortleaf, Virginia, pond and pitch pines. When populations of this beetle are low, they usually attack mature, weakened trees, however when their numbers become epidemic, they quickly attack and kill healthy vigorous trees.

Over the past two years, the New Jersey Department of Environmental Protection's Division of Parks and Forestry has conducted aerial surveys of New Jersey's pine stands to identify and map southern pine beetle infestations. It appears that the acreage of the Southern Pine Beetle infestation has increased in size over the last two years despite the cold winter the state experienced last year. The results of the survey are summarized below.

Year	Acres Infested	Number of SPB Spots	Average Size	% Change
2002	1,412	265	5.3 acres	
2003	2,508	241	10.5 acres	+ 56.3

Anyone requiring further information about this insect should contact the New Jersey Department of Environmental Protection's Division of Parks and Forestry at 609-292-2520 or gkoeck@dep.state.nj.us

HOLLY LOOPER REPORTS

A heavy infestation of the Holly Looper, *Thysanopyga intractata*, was discovered this fall defoliating holly trees on about 20 acres in Barnegat Township, Ocean County. The insect previously has been found along the coastal plain from Massachusetts to Texas, and inland as far as Tennessee. Minor infestations of this insect have been reported in Virginia, Maryland and Delaware. Large-scale defoliation by this insect has not been reported, so it is assumed that the weather conditions were just right for the insect to reach high population levels in this area of the state.

EVALUATION OF HEMLOCK HEALTH IN NEW JERSEY

Crown rating surveys have been completed in 80 hemlock stands in New Jersey to evaluate the health of the hemlock trees to fulfill the requirements of a grant from the United States Department of Agriculture's Animal and Plant Health Inspection Service. The Department continues to release the hemlock woolly adelgid (HWA) predator, *Pseudoscymnus tsugae*, but recovery of this insect was difficult due to the low HWA populations and dieback on the release tree. All 50 *Pseudoscymnus tsugae* release sites and 30 non-release sites have been surveyed throughout the summer and fall. Preliminary results appear to show that hemlock mortality has increased since 2000 due to the effects of the HWA, the droughts of 2001-2002 and the elongate hemlock scale.

Crown rating surveys have also been completed in 11 permanent study plots that have been monitored since 1989 as a result of a continuing grant from the U.S. Forest Service. These permanent study plots were established to study the effects of HWA on the hemlock forests of the state. Over the years, hemlock mortality in the plots has increased, mainly due to HWA. Three additional plots have also experienced high rates of mortality, with each plot having only a few live trees remaining. The only relatively healthy sites are north of Millbrook Village in the Delaware Water Gap, Stokes State Forest and in the Clinton Watershed/ Wawayanda State Park areas.

HWA populations remain low for a second consecutive year but may change in 2004 because of the increase in the amount of new growth on the trees.

ALAMPI LABORATORY SHARES EXPERTISE WITH MAJOR UNIVERSITIES

Throughout 2003, the Alampi Laboratory has provided assistance and shared expertise with Clemson University in South Carolina and with the University of Tennessee as they establish rearing facilities for the HWA predator, *Pseudoscymnus tsugae,* to protect old growth hemlock stands in the Great Smokey National Forest. A major coalition of researchers, nature conservancies, private interests and the USDA Forest Service has come together to save valued hemlocks in South Carolina, Tennessee and Georgia, and has looked to the New Jersey Department of Agriculture for guidance in how to mass-produce the predatory beetle.

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